

1. Identification of Substance & Company



Company Details:

Hilti (New Zealand) Ltd
 Unit 1/B, 525 Great South Rd
 Penrose
 Auckland, 1061
 PO Box 112- 030, Penrose
 Ph 09 526 7783 (between 7-30 AM and 6-30 PM)
 EMERGENCY TELEPHONE NUMBER
 0800 623 000 (National Poisons Centre)

Product

Product name	Hilti HVU
Other names	Hilti Adhesive Capsule, container size: 8g - 465g
HSNO approval	HSR002544
Approval description	Construction Products (Subsidiary Hazard) Group Standard 2006
UN number	NA
Proper Shipping Name	Not regulated
Packaging group	NA
Hazchem code	1T (recommended)
Uses	Adhesive anchor capsule for anchor fastening in concrete

2. Hazard Identification

Approval

This product has been approved under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR002670, Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2006), and is classified as follows:

Classes

Resin:
 6.4A
 6.5B

Hardener:
 6.5B

Hazard Statements

Causes eye irritation.
 May cause an allergic skin reaction.

 May cause an allergic skin reaction.

SYMBOLS

WARNING



Other Classifications

There are no other Classifications that are known to apply.

Precautionary Statements

Read label before use.
 Avoid breathing vapours.
 Contaminated work clothing should not be allowed out of the workplace.
 Wear protective gloves/eye protection.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Use personal protective equipment as required.

Further precautionary statements can be found in Section 4 – First Aid.

3. Composition / Information on Ingredients

resin - ingredients	CAS/ Identification	Class for ingredient(s)	Conc (%)
methacrylic acid, monoester with propane-1,2-diol	27813-02-1	6.5B	2.5-10%
Inorganic filler	NA	Non hazardous	balance

hardener - ingredients	CAS/ Identification	Class for ingredient(s)	Conc (%)
dibenzoyl peroxide (phlegmatised)	94-36-0	5.2B, 6.4A, 6.5B (contact), 9.1D (fish), 9.1D (crustacean)	<2.5%

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

4. First Aid

General Information

You should call the National Poisons Centre if you feel that you may have been harmed or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service). If medical advice is needed, have product container or label at hand. IF exposed or concerned: Get medical advice.

Recommended first aid facilities Ready access to running water is recommended. Accessible eyewash is recommended.

Exposure

Swallowed	Do NOT induce vomiting. Give a glass of water to drink. Contact a doctor.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Apply continuous irrigation with water for at least 15 minutes holding eyelids apart. If eye irritation persists: Get medical advice.
Skin contact	IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Inhaled	Generally, inhalation of fumes is unlikely to result in adverse health effects. If coughing, dizziness or shortness of breath is experienced, remove the patient to fresh air immediately. If patient is unconscious, place in the recovery position (on the side) for transport and contact a doctor.

Advice to Doctor

Treat symptomatically. Allergic reactions may occur.

5. Firefighting Measures

Fire and explosion hazards:	There are no specific risks for fire/explosion for this chemical. It is non-flammable.
Suitable extinguishing substances:	Water spray, carbon dioxide, carbon dioxide blanket, foam or drypowder.
Unsuitable extinguishing substances:	Unknown.
Products of combustion:	Carbon dioxide, and if combustion is incomplete, carbon monoxide, oxides of nitrogen and smoke. Water. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.
Protective equipment:	No special measures are required.
Hazchem code:	1T (recommended)

6. Accidental Release Measures

Containment	If greater than 1000L is stored, secondary containment is required. Emergency plans to manage any potential spills must be in place. Prevent spillage from spreading or entering soil, waterways or drains.
Emergency procedures	The container size will generally prevent a major spill. In the event of a large spillage (>100kg) alert the fire brigade to location and give brief description of hazard. Stop the source of the leak, if safe to do so. Wear protective equipment to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Contain using sand, earth or vermiculite. Do not use sawdust on concentrate. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. (If this occurs contact your regional council immediately).
Clean-up method	Collect material mechanically and place in properly labelled containers or drums for disposal. If capsule has ruptured, absorb liquid with sand, diatomite, acid binder or universal binder. If contamination of crops, sewers or waterways has occurred advise

Disposal	local emergency services. Collect recoverable material into labelled containers for recycling or salvage. Recycle containers wherever possible. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.
Precautions	Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation.

7. Storage & Handling

Storage	Avoid storage of harmful substances with food. Keep in a cool, dry and dark place; 5°C to 25°C in original packaging only. Store out of reach of children. Protect from heat and direct sunlight. Keep away from ignition sources.
Handling	Avoid contact with incompatible substances as listed in Section 10. Observe expiry date on capsule. Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements. Avoid skin and eye contact and inhalation of vapour. Do not smoke.

8. Exposure Controls / Personal Protective Equipment

Workplace Exposure Standards



A workplace exposure standard (WES) has not been established by WorkSafe NZ for this product. There is a general limit of 10mg/m³ for dusts and mists when limits have not otherwise been established.

NZ Workplace Exposure Stds (2013)	Ingredient	WES-TWA	WES-STEL
	methacrylic acid, monoester with propane-1,2-diol	no data	no data
	dibenzoyl peroxide	50ppm, 242 mg/m ³	100ppm, 483mg/m ³

Engineering Controls

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety in Employment Act 1992 (HSE). Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

Personal Protective Equipment

Eyes		Protect eyes with goggles, safety glasses with side shields. Avoid wearing contact lenses.
Skin		Avoid repeated or prolonged skin contact. Wear overalls, rubber boots and impervious gloves. Nitrile or NBR gloves are recommended. Replace frequently. Gloves should be checked for tears or holes before use. Leather gloves are not recommended. Remove protective clothing and wash exposed areas with soap and water prior to eating, drinking or smoking. Wash hands after handling. Note: this product is unlikely to cause irritation to most people, however, because an allergic response is possible, skin protection is required.
Respiratory		A respirator when airborne concentrations approach the WES (section 8). Use a organic vapour cartridge with a dust/mist filter. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order.

WES Additional Information

Not applicable

9. Physical & Chemical Properties

Appearance	Foil capsule containing a resin (yellowish liquid) and a hardener (white powder)
Odour	Ester like
pH	~6
Vapour pressure	0.1hPa at 20°C
Viscosity	>300mPas (dynamic at 20°C)
Boiling point	Not determined
Volatile materials	Solvent content: 0%, water content: 0%
Freezing / melting point	not determined
Solubility	Insoluble in water
Specific gravity / density	Resin: 1.1 g/cm ³ , hardener 1.23g/cm ³
Flash point	>101°C
Danger of explosion	No data
Decomposition temperature	SADT 55°C (peroxide)
Auto-ignition temperature	Not self igniting
Upper & lower flammable limits	No data
Corrosiveness	Non corrosive

10. Stability & Reactivity

Stability	Stable
Conditions to be avoided	Containers should be kept closed in order to avoid contamination. Keep from extreme heat and open flames.
Incompatible groups	None known
Substance Specific Incompatibility	None known
Hazardous decomposition products	None known
Hazardous reactions	None known

11. Toxicological Information

Summary

IF IN EYES: may cause irritation.

IF ON SKIN: sensitised individuals may experience allergic skin reaction if exposed, even to very low levels of methacrylic acid, monoester.

Supporting Data

Acute	Oral	Using LD ₅₀ 's for ingredients, the calculated LD ₅₀ (oral, rat) for the mixture is >5,000 mg/kg. Data considered includes: dibenzoyl peroxide 1072mg/kg (mouse), 2255mg/kg (rat).
	Dermal	No evidence of dermal toxicity.
	Inhaled	No evidence of inhalation toxicity.
	Eye	The mixture is considered to be an eye irritant, because dibenzoyl peroxide is considered an eye irritant in more concentrated form.
	Skin	The mixture is not considered to be a skin irritant, however repeated contact may result in irritation.
Chronic	Sensitisation	The mixture is considered to be a contact sensitizer, because some of the ingredients present in greater than 0.1% (methacrylic acid, monoester with propane-1,2-diol and dibenzoyl peroxide), is known to be a contact sensitizer.
	Mutagenicity	No ingredient present at concentrations > 0.1% is considered a mutagen.
	Carcinogenicity	No ingredient present at concentrations > 0.1% is considered a carcinogen.
	Reproductive / Developmental	No ingredient present at concentrations > 0.1% is considered a reproductive toxicant.
	Systemic	No ingredient present at concentrations > 1% is considered a target organ toxicant.
	Aggravation of existing conditions	None known.

12. Ecological Data

Summary

This mixture is not considered to be ecotoxic in the aquatic environment.

Supporting Data

Aquatic	No evidence of aquatic ecotoxicity.
Bioaccumulation	No data
Degradability	Readily biodegradable
Soil	No data available for the mixture.
Terrestrial vertebrate	This product is not considered harmful to terrestrial vertebrates.
Terrestrial invertebrate	The mixture is not considered harmful to terrestrial invertebrates.
Biocidal	Not applicable
Environmental effect levels	No EELs are available for this mixture or ingredients

13. Disposal Considerations

Restrictions	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
Disposal method	Disposal of this product must comply with the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment.
Contaminated packaging	The cartridges are a disposable injection system and therefore cannot be recycled. Send to landfill or similar.

14. Transport Information

Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2007

This mixture is not considered a hazardous substance for transport on land.

UN number:	NA	Proper shipping name:	NA
Class(es)	NA	Packing group:	NA
Precautions:	NA	Hazchem code:	NA

IMDG

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

UN number:	NA	Proper shipping name:	NA
Class(es)	NA	Packing group:	NA
Precautions:	NA	EmS	NA

IATA

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

UN number:	NA	Proper shipping name:	NA
Class(es)	NA	Packing group:	NA
Precautions:	NA		

15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR002544, Construction Products (Subsidiary Hazard) Group Standard 2006.

Specific Workplace Controls (as per HSNO approval referenced to Controls Matrix)

Key workplace requirements are:

SDS	To be available within 10 minutes in workplaces storing > any quantity.
Labelling	No removal of labels and/or decanting of product into other containers can occur.
Emergency plan	Required if > 1000L is stored.
Approved handler	Not required.
Tracking	Not required.
Bunding & secondary containment	Required if > 1000L is stored.
Signage	Not required.
Location test certificate	Not required.
Flammable zone	Not required.
Fire extinguisher	Not required.

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health, Safety in Employment Act and Regulations, local Council Rules and Regional Council Plans.

16. Other Information**Abbreviations**

Approval Code	Approval HSR002544, Construction Products (Subsidiary Hazard) Group Standard 2006 Controls, EPA. www.epa.govt.nz
CAS Number	Unique Chemical Abstracts Service Registry Number
Ceiling	Ceiling Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.
Controls Matrix	List of default controls linking regulation numbers to Matrix code (e.g. T1, I16).
EC₅₀	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
ERMA	Environmental Risk Management Authority (now EPA)
EPA	Environmental Protection Agency (previously known as ERMA)
HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSNO	Hazardous Substances and New Organisms (Act and Regulations)
IARC	International Agency for Research on Cancer
LEL	Lower Explosive Limit
LD₅₀	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
LC₅₀	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
MSDS (SDS)	Material Safety Data Sheet (or Safety Data Sheet)
STEL	Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded
TWA	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
UEL	Upper Explosive Limit
UN Number	United Nations Number
WES	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed.

References

Data	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID) http://www.epa.govt.nz/hs/compliance/chemicals.html , for specific chemicals.
EPA Transfer Gazettes	Classifications and controls assigned for specific ingredients (consolidated gazette, 2004)
Controls Matrix	Part of the EPA New Zealand User Guide to the HSNO Control Regulations
WES 2013	The NZ Workplace Exposure Standards Effective from 2013, published by WorkSafe NZ and available on their web site – www.worksafe.govt.nz .
Other References:	Suppliers SDS

Review

Date	Reason for review
April 2012	NA, new SDS
November 2014	Update, review of classes for ingredients. Review of toxicological data, formatting. DoL to WorkSafe, including IATA and IMDG information.

Disclaimer

This SDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The SDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the SDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely HSNO classifications, are based on our experience, EPA Guidelines and international classifications. This SDS is copyright Datachem and must not be copied, edited or used for other than intended purpose. To contact the SDS author, email info@datachem.co.nz or phone: (09) 940 30 80.

